DOCUMENT RESUME

ED 128 326 95 SP 010 398

AUTHOR Mahan, James M.
TITLE Qualitative Indices for Selected Educational Innovations. Teacher Education Forum; Volume 3, Number 8.
INSTITUTION Indiana Univ., Bloomington. Div. of Teacher Education.
SPONS AGENCY Bureau of Educational Personnel Development (DHEW/OE), Washington, D.C.
PUB DATE Feb 75
GRANT OEG-0-72-0492(725)
NOTE 16p.; For related documents, see ED 097 306, ED 108 871, ED 109 654, and SP 010 391-405

EDRS PRICE MF-$0.83 HC-$1.67 Plus Postage.
DESCRIPTORS *Behavior Rating Scales; Cultural Pluralism; *Educational Innovation; Elementary School Curriculum; *Elementary Schools; Evaluation Criteria; Individualized Instruction; Open Plan Schools; *Student Behavior; *Teacher Behavior; Team Teaching

ABSTRACT

Presented in this paper is a selection of qualitative indices for four educational innovations (cultural pluralism, individualized instruction, open classroom, and team teaching) prepared by participants of a continuing action lab of the Association for Supervision and Curriculum Development. Participants estimated that over 65 percent of the curricular and organizational innovations in elementary schools today are falling short of their educational potential. They realized that innovation involves not only instructional materials, equipment, time redistribution, and structure reorganization, but that it involves changes in the behaviors of teachers and pupils. Participants were asked to consider specific teacher and pupil behaviors that should accompany particular innovations and to prepare priority indices for teacher and pupil observable behaviors. These indices were to represent only behaviors that would merit inclusion on a checklist for evaluating the actual classroom success of innovations. The indices were consolidated and converted into a scale conducive to rapid, brief responses that could be used in an informal, self-evaluative manner. For each innovation, indices are provided for teacher and pupil observable behaviors relative to an evaluative rating continuum from one to five (from many observations of desirable indices to many observations of less desirable indices). A brief synthesis of the thinking of the action lab members is offered by way of eight recommendations for change for the consideration of school faculties, curriculum and organization supervisors, teacher educators, and consultants. (MM)

Documents acquired by ERIC include many informal unpublished materials not available from other sources. ERIC makes every effort to obtain the best copy available. Nevertheless, items of marginal reproducibility are often encountered and this affects the quality of the microfiche and hardcopy reproductions ERIC makes available via the ERIC Document Reproduction Service (EDRS). EDRS is not responsible for the quality of the original document. Reproductions supplied by EDRS are the best that can be made from the original.

ED128326

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

vision of Teacher Education

Indiana University/Bloomin

FORUM Teacher Education FORUM Teacher Education FORUM

SP010 398

TEACHER EDUCATION FORUM

The *Forum Series* is basically a collection of papers dealing with all phases of teacher education including inservice training and graduate study. It is intended to be a catalyst for idea exchange and interaction among those interested in all areas of teacher education. The reading audience includes teachers, school administrators, governmental and community administrators of educational agencies, graduate students and professors. The *Forum Series* represents a wide variety of content: position papers, research or evaluation reports, compendia, state-of-the-art analyses, reactions/critiques of published materials, case studies, bibliographies, conference or convention presentations, guidelines, innovative course/program descriptions, and scenarios are welcome. Manuscripts usually average ten to thirty double-spaced typewritten pages; two copies are required. Bibliographical procedures may follow any accepted style; however, all footnotes should be prepared in a consistent fashion. Manuscripts should be submitted to William E. Blanton, editor. Editorial decisions are made as soon as possible; accepted papers usually appear in print within two to four months.

WILLIAM E. BLANTON, editor
Indiana University

LEO C. FAY
director-dte

HAROLD HARTY
assoc. director
dissemination-dte

TOBY BONWIT
publications editor-dte

ADVISORY BOARD

ROGER EMIG
City of E. Chicago (Ind.)

GENE FARIS
Indiana University

DAVID GLIESSMAN
Indiana University

EDWARD JENKINSON
Indiana University

CARMEN PEREZ
Indiana University

ROBERT RICHEY
Indiana University

SIV THIAGARAJAN
Indiana University

RONALD WALTON
Bloomington (Ind.) Schools

Produced by the Division of Teacher Education, Indiana University-Bloomington, a component of the School of Education, supported in part by way of an Institutional Grant (OE-OEG: 0-72-0492:725) with funds from the United States Department of Health, Education, and Welfare Office of Education, under the provisions of the Bureau of Educational Personnel Development as a project. The opinions expressed in this work do not necessarily reflect the position or policy of the Office of Education, and no official endorsement by the Office of Education should be inferred.

QUALITATIVE INDICES FOR SELECTED EDUCATIONAL INNOVATIONS

JAMES M. MAHAN

division of teacher education
321 education building
indiana university
bloomington, indiana 47401

February 1975

Volume 3 **Number 8**

PRELUDE TO INDICES

For three consecutive years (1972-74) a continuing Association for Supervision and Curriculum Development (ASCD) action lab met to share in a "Cooperative Adventure Facilitation Elementary School Change." In the first, second, and third years, 40, 78, and 56 educators respectively attended the lab sessions. Continuity was provided by 13 people who participated in all three sessions and 45 people who participated in two sessions.

Lab participants and resource people shared an uneasiness concerning the quality of many of the curricular and organizational innovations claimed for elementary schools today. The references to partially used, only dimly conceived innovative programs noted in *Behind the Classroom Door* (Goodlad and Klein, 1970) did little to quell that uneasiness. Through "homework" assignments completed prior to arrival at the ASCD national conferences, through lab presentations, and through intensive small group interaction, considerable concern was given the question, "What should my school's innovation look like when it is 100% successful?"

So that participants could generate data with personal meaning (as opposed to data extracted from someone else's research report) a survey was completed by the 40 members of the 1972 lab and submitted to the lab staff for pre-meeting compilation. Participants were asked how many elementary schools they had visited in the two previous years to observe and study the implementation of innovative curricula and the implementation of an organizational change.

The data revealed that ASCD change agents do make site visits to innovating schools to scout and assess new educational approaches. Schools pioneering the use of new developments do find themselves in the role of a demonstration center. Descriptions of site visit observations of the ongoing change efforts of others, unfortunately, are in harmony with change process pitfalls, cautions, issues, or shortcomings mentioned by such commentators on innovation as Havelock (1970), Gross and Giaquinta (1968), Hartman (1970), Polemni (1969), and Smith and Keith (1971). Lab participants tended to think that over 65% of both curricular and organizational innovations were falling short of their educational potential. Spirited lab discussions were held annually on topics such as processes, activities, and techniques available to the teachers, curriculum specialists, and administrators who are dedicated to the movement of selected innovations into the "complete implementation" stage.

Some questions raised in these discussions were: "Are unique instructional behaviors distinguishable in a room where an innovation has been implemented at a very high quality level?", "What are several observable behaviors

---

JAMES M. MAHAN is *associate professor of education* and *director of alternative programs component*, Division of Teacher Education, Indiana University, Bloomington, Indiana.

or indices associated with some of today's most publicized innovations?", "What specific behaviors can teachers generate for themselves and their pupils under innovative conditions?", "What indices do we lab members feel are important?", and "Who should generate behavioral indices?" The questions led to a difficult, time consuming "homework" task for the 56 participants in the 1974 lab.

Instructions for Writing Indices

Participants were given the following background and instructions before preparing indices:

> We often read (and sometimes personally observe) that many school innovations exist only on paper--are more purported than real. Innovations probably are consummated only when teacher behavior and pupil behavior are consistent with the philosophy and methodology of the developers of the innovation. Teacher behavior, administrator behavior, and pupil behavior must change in some way as major innovations are introduced in schools. Changing one's behavior is not an easy task. Furthermore, we often do not visualize the new behavior toward which we are to strive. We do not attempt to imagine what we will look or sound like if we elect to practice a new instructional or management technique.
>
> It might be very useful for each of us to have a pragmatic checklist of key teacher behaviors and key pupil behaviors that we could actually practice or observe in a school where a selected innovation is functioning at 100% effectiveness. These observable classroom behaviors could be called INDICES. The INDICES, in turn, could be used as some of the criteria for describing whether or not the program is being implemented satisfactorily.
>
> Listed are the most common innovations championed by the 1972 and 1973 action lab participants. You are asked to think carefully about specific teacher behavior and specific pupil behavior that you feel should accompany each innovation. Please create two priority indices for the teacher and two priority indices for the pupils that could be observed by a sophisticated visitor to the school/classroom. These should be indices representing very important behaviors that you feel merit inclusion on any checklist that might be developed to aid in evaluating the actual success of the innovation.

Resultant Indices

The 1974 action labbers conscientiously returned a provocative assortment of specific and less specific indices. Lab staff members revised the wording in the interests of brevity while retaining the content and intent. Indices very similar in wording were combined. For those innovators who might like to use the indices in an informal, self-evaluative sense, they were converted into a scale conducive to rapid, brief response.

A selection of indices pertinent to these popular innovations follows:

(a) cultural pluralism in the classroom

(b) individualized learning programs

(c) the open classroom

(d) team teaching

Respondents seemed to have difficulty identifying behavioral expectancies for culturally pluralistic curricular thrusts, so fewer indices were received for that section. The somewhat overlapping features of certain innovations necessitated the arbitrary placement of a particular index under only one category of innovation. Readers are encouraged to regroup indices to fit their own home conditions.*

A Start Towards Sets of Qualitative Indices For Use in Local Assessment of Selected Educational Innovations

Example Evaluative Continuum:

	1	2	3	4	5	
(+) many observations of desirable indices						(-) many observations of less desirable indices

Suppose: You are observing in a classroom where a new PROCESS-INQUIRY SCIENCE PROGRAM has been introduced. Relative to teacher behavior in this classroom, the following two indices might be applicable.

In talking with pupils the teacher routinely:

*4 (+) raises provocative questions for students to ponder and expects multiple, divergent answers

(-) asks questions calling for specific, convergent responses from pupils yielding up the teacher's predetermined "correct" answer

*(a respondent who places a "4" in the blank is saying that more instances of the less desirable (-) index were observed in the room than were instances of the desirable (+) index)

NOW: referring to the example continuum above, please put the *number* in the blank contiguous with each pair of indices that best expresses what you observed in the innovative classroom/school. The *low* numbers indicate that you saw many instances of *desirable* indices in use.

---

*The indices given here represent only a small number of those actually received. Interested readers may obtain a complete list by writing the author, School of Education, Indiana University, Bloomington, Indiana 47401.

Instructional Programs Emphasizing Cultural Pluralism in the Classroom

(+) 1 2 3 4 5 (-)

Pupil Indices:

1. Pupils:
   (+) receive instruction from materials and persons which aid in understanding but which do not force conformity of conclusions
   ____ (-) receive instruction from people and materials which espouse one set of cultural values exclusively

2. From frequently asked questions, students:
   (+) probe to understand the special actions of other ethnic groups
   ____ (-) probe to secure answers which make them comfortable

3. During recess and after school, pupils:
   (+) seek out friends from variant cultural groups for play
   ____ (-) seek out friends from their own ethnic group for play

4. Student groups in class and in free activities are in combinations which are:
   (+) functionally structured and include a mixture of ethnic and cultural groups
   ____ (-) sex and culturally biased

5. Through question and discussion concerning classwork students:
   (+) learn to accept values and different reactions from others of various cultural backgrounds to a statement or issue
   ____ (-) learn only one acceptable reaction to a statement or issue and ridicule opinions of others

6. During any school day pupils will:
   (+) freely express themselves in their mother tongue and make progress in the knowledge of their own language
   ____ (-) use only English (the language of the school) to express themselves and learn to reject their mother tongue

7. Students are encouraged to draw extensively on their community as a learning aid:
   (+) students bring in people and objects and/or go on field trips individually and/or in groups
   ____ (-) students are bound in by the walls of the classroom

8. During oral reading, each pupil is given the opportunity to:
   (+) use his own dialect
   ____ (-) use only his best approximation of the teacher's conception of standard English

Teacher Indices:

1. Teachers display considerable awareness of cultural idiosyncrasies by:
   (+) demonstrating a basic sensitivity to the values and beliefs of others
   ____ (-) consciously or unconsciously playing up fears by mentioning myths still believed about minority groups

2. In the instructional program emphasizing multi-cultural experiences, the teacher:
   (+) accepts the idea of cultural pluralism and uses materials
   ____ which aid the pupil in understanding and relating to others
   (-) adheres to the premise that cultures should be absorbed

3. Teachers communicate:
   (+) by example, verbally and non-verbally, their respect for
   ____ all ethnic and cultural groups
   (-) by example, verbally and non-verbally, their restricted views regarding ethnic and cultural groups other than their own

4. Instructors:
   (+) emphasize common elements and dynamics of all cultures,
   ____ using illustrations and examples from many
   (-) talk one way in class and another outside; summarize discussions by revealing the supposed superiority of one point of view

5. During a typical school day the teacher will:
   (+) speak to the children in their native language
   ____ (-) use only English to communicate with the students

6. At regular intervals the teacher will:
   (+) conduct activities related to the students' home culture
   ____ (-) ignore the students' cultural assets

7. The teachers plan the curriculum to:
   (+) include many varied experiences (field trips, speakers, films, role-playing, discussion, etc.) which expose students to a variety of cultural experiences, contributions, and problems
   ____ (-) include only the music and art of other cultures with no evidence o the students examining the value systems, political structures, current problems, etc. of groups other than the dominant one

8. The teacher:
   (+) frequently provides opportunities for pupils to role-play
   ____ situations involving people of different cultures
   (-) seldom makes such provision

Individualized Learning Programs

(+) 1 2 3 4 5 (-)

Pupil Indices:

1. Pupils demonstrate their awareness of the overall plans for instruction as evidenced by:
   (+) their ability to consistently find additional, appropriate materials and tests, and assume responsibility for their own conduct
   ____ (-) loss of interest when one task is completed and evident frustration at not knowing what to do next, waiting for the teacher to make decisions

2. Pupils demonstrate their familiarity with a variety of learning materials by:
   (+) being able to independently find, set up, and operate A-V equipment and instructional aids
   ____ (-) relying upon the teacher to do the finding, setting up, and operation

3. In classroom activity students are seen:
   (+) engaged in different tasks, working independently with a minimum of direction from the teacher
   ____ (-) performing identical tasks or waiting for directions from the teacher

4. Student assignments contain:
   (+) alternative activities to accomplish the learning task based on an assessment of individual needs
   ____ (-) specific activities identical for all students based on administrative selection

5. In completing an independent study the pupil:
   (+) selects the learning objective and the means of achieving it
   ____ (-) selects the means of achieving the learning objective diagnosed and prescribed by the teacher

6. At the conclusion of a learning activity or upon reaching an objective the student:
   (+) takes a post-test to demonstrate mastery before proceeding to the next objective
   ____ (-) proceeds to the next activity

7. Conferences on progress can be observed at any given time:
   (+) conferences are recorded and teacher prescriptions made
   ____ (-) conferences are not recorded, and pupil is not given a prescription

8. Students show confidence in selecting materials by:
   (+) selecting materials which are of value and interest
   ____ (-) depending on the instructor to select interest areas and materials

Teacher Indices:

1. Teachers:
   (+) make use of extensive records to track student growth
   ____ (-) organize thoughts and perceptions of student growth just prior to conference or to preparing report cards

2. The teacher may use the games approach:
   (+) to diminish her or his role and maximize the learner's opportunity to see the consequence of his action
   ____ (-) to maximize the pleasure of learning what success is really like

3. In presenting material to his or her class, the teacher:
   (+) clusters students in small groups according to needs and learns with the students
   ____

(-) lectures in the same manner to the total group with little or no student involvement

4. During a class period the teacher spends most of her/his time:
   (+) managing the learning activities of all the individual students
   ____
   (-) providing the students with information

5. When speaking to a child the teacher:
   (+) maintains eye contact and devotes 100% attention
   ____ (-) is often seen to be interested in many other things and students

6. Teacher arranges room so that:
   (+) materials of diverse levels and in varying quantities are accessible for individual use and return
   ____
   (-) learning objectives and the media necessary are directed to groups not individuals

7. Visual evidence of student achievement is displayed by:
   (+) visible record keeping such as graphs or listing of instructional organization showing individual patterns of involvement and accomplishment
   ____
   (-) charts or records on display where each child's progress is noted in relation to other children's progress

8. The teacher:
   (+) responds to emotional attitudes as well as academic requirements of the children
   ____
   (-) tries to ignore emotional attitudes and reactions of the children

The Open Classroom

(+) 1 2 3 4 5 (-)

Pupil Indices:

1. The student:
   (+) through frequent individual conferences helps plan a portion of his program
   ____
   (-) receives the same program direction from the teacher that every other child in the class receives

2. Children who finish major tasks early:
   ____ (+) choose secondary tasks arranged by the teacher for this purpose
   (-) move around the room hoping to look busy

3. Children are observed at different times of the day:
   (+) moving freely from resource areas and labs to other learning stations and seem to be actively engaged solving a problem or observing and investigating a situation, interacting with a variety of students
   ____
   (-) in a defined area with one teacher all working on a single problem using the same resources

4. When learning from his own interests, the child uses classroom learning materials:
   (+) which represent his choices among a large variety of materials
   ____ (-) which have been prepared by the teacher for all children in the class as a group

5. Given flexibly structured materials (e.g. magnets, sand, wood, "junk") the child will:
   (+) show the ability to invent, improvise, modify their use, depending upon the questions the materials suggest to him
   ____ (-) show no evidence of creative planning, using the materials only in a conventional manner

6. The amount of work accomplished on any given day:
   (+) is recorded and evaluated
   ____ (-) is immaterial because the child may have done more yesterday or will do more tomorrow

7. In seeking solutions to problems of any kind:
   (+) students freely approach another person in the room (another student or an adult)
   ____ (-) students always ask the teacher first

8. Students:
   (+) appear to be well acquainted with procedures and materials provided, and work with purpose and self direction
   ____ (-) appear to need frequent adult intervention in order to use materials effectively and to control behavior

Teacher Indices:

1. In arranging the classroom environment, the teacher:
   (+) has several areas of interest about the classroom to which the children may move to support their learnings
   ____ (-) provides no areas which are conducive to small group or individual exploration, concerning himself primarily with the smooth running of his day

2. As the class activities are in session, the teacher:
   (+) roams to the groups and individuals as a check, guide, and support
   ____ (-) leaves the students on their own and observes only

3. Teacher sets flexible time limits:
   (+) allows individual pupils to pursue one topic
   ____ (-) places time limits on activities

4. The teacher uses oral and written messages:
   (+) to communicate individually with pupils singly or in small groups
   ____ (-) to communicate "to whom it may concern" so that no one will feel left out

5. Scheduling of activities, times, etc.:
   (+) is done jointly by classroom and interest area teachers, as well as students
   ____ (-) is done by the administrator

6. The teacher is:
   (+) a facilitator of learning, interacting with the child and his real world, understanding that knowledge is unique to each individual and that the child learns best from direct, personal exploration of his environment
   ____
   (-) a transmitter of knowledge requiring children to submit to adult authority, and to master a specified predetermined curriculum

7. In the questioning process:
   (+) the great majority of questions come from the students
   ____ (-) the teacher seems to raise most of the questions

8. The teacher is most frequently observed:
   (+) moving from individuals and groups as students request his assistance in locating information, materials, and resource people
   ____
   (-) in a leadership role directing individuals or groups of students and making most of the suggestions himself rather than soliciting solutions from the students

Team Teaching

(+) 1 2 3 4 5 (-)

Pupil Indices:

1. Students in a team situation:
   (+) learn through several teaching styles
   ____ (-) learn by one teaching style

2. The student is exposed to several teachers' personalities and approaches to education:
   (+) there is an opportunity to match students and teachers with positive responses to each other
   ____
   (-) there is no observable evidence that an effort has been made to match students and teachers

3. Pupils participating in a team environment:
   (+) will identify effectively with all members of the team
   ____ (-) will feel dependent upon a particular team member

4. Students will generally appear to:
   (+) move fluidly from large group to small group and occasionally to individual instruction
   ____
   (-) be operating in a rather fixed environment

5. Through interdisciplinary teaming:
   (+) students can recognize the relationship between areas of study
   ____
   (-) students study each subject separately

6. Students in teamed classes:
   (+) know each other well and work together
   ____ (-) see themselves as separate classes brought together on special occasions

7. Pupils feel more at ease working with a congenial teaching team mainly because:
   (+) they meet a common philosophy about discipline, and freedom
   ____ to express controversial views
   (-) when their homeroom teacher is absent, there is someone familiar present

8. Through team teaching the pupils can:
   (+) meet with other students to discuss and evaluate a learning
   ____ experience
   (-) organize their own learning experiences without conference with others, or work together only to find answers in a rote format

Teacher Indices:

1. Teachers show their degree of responsibility and initiative at planning meetings by:
   (+) active contribution of ideas, volunteering for a share
   ____ of work, being open to other ideas
   (-) passive receiving of others' ideas, not being willing to pick up a share of the work, being closed to other ideas

2. Communication among teachers:
   (+) is frequent and informal, planning and assessment is open
   ____ and non-threatening
   (-) is limited to specific planning sessions making teachers lead non-personal lives in the school setting

3. In responding to students:
   (+) teachers appear to know all children and their individual needs
   ____ (-) refer some children to their teacher or group

4. Teachers work:
   (+) cooperatively in planning, implementing, directing, and
   ____ evaluating students' learning activities
   (-) alone in providing for students' learning activities, giving relieved time to other members of the team, and discarding the principles of cross-disciplining

5. The teacher has:
   (+) free time to observe pupils, record behaviors and discuss
   ____ them with the team members
   (-) no time for pupil observation

6. The teacher makes his/her own short term lesson plans:
   (+) as an extension of the team's long-range and intermediate-
   ____ range plans
   (-) without relating them to the team's long-range plans

7. Students are in teaching-learning groups:
   (+) that vary in size, composition and number of teachers
   ____ as the situation demands
   (-) turn teaching is observed rather than team teaching

8. Teacher in a leadership role:
   (+) changes strategy for different units and subjects depending upon his particular strengths and interests
   (-) tends to dominate the team and is the same person regardless of the subject being explored

Recommendations for Faculties Adopting New Programs

Not only should instructional materials and equipment, time distribution, or organizational structure be different when a major educational change is installed, but instructors should also behave differently and so should their pupils. Change is not purchased casually in boxes, kits, rolling labs, video tapes, open space, store front settings, or individualized software. Frequent references in educational literature to curricular white elephants and skeletons of organizational rearrangements haunting school corridors and closets support this contention. Change is achieved by principals who demonstrate instructional leadership in ways different today from yesterday; by teachers who truly vary the learning environment, patterns of instruction, and teaching behavior; and by pupils who master something more and/or something different via appropriate modes of individual and group learning. As a brief synthesis of the thinking of the action lab members, the following recommendations for change are offered for the consideration of school faculties, curriculum and organization supervisors, School of Education professors, and other consultants.

A. Adopt a new program for your school only if there are provisions for inservice preparation before it becomes operable *and* provisions for continuing inservice preparation during at least the first year of usage. Quality usage is more apt to depend on post-installation of group planning, self planning, and continuous evaluation.

B. Spend more time analyzing the philosophy, objectives, implied modes of learning, and teaching techniques associated with the innovation than you spend manipulating the equipment, reading the materials, or mastering the content. It is new "doing," not new "stuff" that you seek.

C. As a faculty, openly discuss how a skilled teacher should function in the classroom if the new program is used. Draw contrasts between current patterns of teacher behavior and desired new patterns. Set personal change goals.

D. Glimpses of the ideal are essential if individual behavior is to be shaped slowly to more productive ends. Insist that exemplary models of highly effective use of the new program be presented and analyzed repeatedly in inservice sessions. This means that outstanding films, video tapes, tape recordings, or live demonstrations must be purchased, rented, or created.

E. Form groups of teachers and administrators to generate acceptable sets of behavioral indices for faculty members and students who are utilizing the innovative approach. Strive for school concensus concerning the priority to be placed on the most critical indices. Consider involving student representatives and parent representatives in some of these sessions.

F. Use the indices as bench marks for continuous self-evaluation. In addition, ask your team teaching partner, another faculty member with whom you can comfortably share triumphs and tragedies, your student teacher, or a non-threatening outsider to rate you periodically against achievement of the indices. Monitor your own performance in a systematic manner.

G. Make pupil achievement of pupil indices a key element in the evaluation of individual pupil progress. The indices are likely to have more application to a lifetime of problem solving and coping than do standardized tests, oral responses, and homework papers.

H. Try writing a few behavioral indices for the latest innovation you have adopted. It is a difficult task but a rewarding one for educators who want to breathe robust life into the diverse and exciting learning opportunities of the 1970's. (Try rewording the ones in this article to fit your own teaching situation!)

Bibliography

Goodlad, John I. and Klein, M. Frances, *Behind the Classroom Door*, Worthington, Ohio: Charles A. Jones Publishing Company, 1970.

Gross, N., Giaquinta, J.B., and Bernstein, M., "An Attempt to Implement a Major Educational Innovation: A Sociological Inquiry," Report No. 5, 1968, Center for Research and Development on Educational Preference, Harvard University.

Hartman, Allen, *Installation Strategies: A Retrospective and Prospective Analysis*, Syracuse, N.Y.: Eastern Regional Institute for Education, 1970.

Havelock, Ronald G., *A Guide to Innovation in Education*, Ann Arbor: Center for Research on Utilization of Scientific Knowledge, University of Michigan, 1970.

Polemni, A.J., "A Study of the Status of Title III Projects," *Phi Delta Kappan*, 1969, Vol. 51, 41-43.

Smith, Louis M. and Keith, Pat, *Anatomy of Educational Innovation*, New York: John Wiley and Sons, 1971.